WHAT IS CLAIMED IS:

1. An isolated antibody that binds to FGFR1, wherein the antibody is an agonist of FGFR1 activity and wherein the antibody binds to peptide #26 KLHAVPAAKTVKFKCP (SEQ ID NO: 28) or peptide #28 FKPDHRIGGYKVRY (SEQ ID NO: 29).

2. The antibody of claim 1, wherein the antibody is a human, humanized, or chimeric antibody.

3. An anti-FGFR1 antibody of claim 1 or 2, wherein the antibody comprises (a) HVR-H1 comprising the amino acid sequence GFTFTSNWIS (SEQ ID NO: 9), (b) HVR-H2 comprising an amino acid sequence selected from the group consisting of AEIDPYDGATDYADSVKG (SEQ ID NO: 14) and EIDPYDGATDYADSVKG (SEQ ID NO: 15), and (c) HVR-H3 comprising an amino acid sequence selected from the group consisting of TGTDVMDY (SEQ ID NO: 19) and GTDVMDY (SEQ ID NO: 20) and wherein the antibody comprises (a) HVR-L1 comprising the amino acid sequence RASQDVSTAVA (SEQ ID NO: 21); (b) HVR-L2 comprising the amino acid sequence SASFLYS (SEQ ID NO: 22); and (c) HVR-L3 comprising the amino acid sequence QQSYTTPPT (SEQ ID NO: 23).

4. The antibody of any one of claims 1-3, wherein the antibody is a multispecific antibody.

5. The antibody of any one of claims 1-4, wherein the antibody is a bispecific antibody.

6. The antibody of claim 4 or 5, wherein the antibody also binds to beta-Klotho.

7. The antibody of any one of claims 1-6, which is an IgG1 antibody.

8. Isolated nucleic acid encoding the antibody of any one of claims 1-7.

9. A host cell comprising the nucleic acid of claim 8.

10. A method of producing an antibody comprising culturing the host cell of claim 9 so that the antibody is produced.

11. The method of claim 10, further comprising recovering the antibody from the host cell.

12. A pharmaceutical formulation comprising an antibody of any one of claims 1-7 and a pharmaceutically acceptable carrier.

13. The antibody of any one of claims 1-7 for use as a medicament.

14. The antibody of any one of claims 1-7 for use in treating a metabolic disease or condition selected from the group consisting of: polycystic ovary syndrome (PCOS), metabolic syndrome (MetS), obesity, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), hyperlipidemia, hypertension, type 2 diabetes, non-type 2 diabetes, type 1 diabetes, latent autoimmune diabetes (LAD), and maturity onset diabetes of the young (MODY).

15. The antibody of any one of claims 1-7 for use in sensitizing an individual to insulin.

16. Use of the antibody of any one of claims 1-7 in the manufacture of a medicament for treatment of a metabolic disease or condition selected from the group consisting of: polycystic ovary syndrome (PCOS), metabolic syndrome (MetS), obesity, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), hyperlipidemia, hypertension, type 2 diabetes, non-type 2 diabetes, type 1 diabetes, latent autoimmune diabetes (LAD), and maturity onset diabetes of the young (MODY).

17. Use of the antibody of any one of claims 1-7 in the manufacture of a medicament for sensitizing an individual to insulin.

18. Use of the antibody according to any one of claims 1-7 in the manufacture of a medicament for treating diabetes in an individual.

19. The use of claim 18, wherein the medicament is to be administered with another agent to treat diabetes provided that the other agent is not insulin.

20. The use of claim 18, wherein the medicament is to be administered with an agent to treat cardiovascular disease.

21. The use of claim 19 or 20, wherein the other agent is selected from the group consisting of: a glp-1 analog, a synthetic amylin, a glucagon receptor antagonist, and leptin.

22. The use of claim 21, wherein the glucagon receptor antagonist is an anti-GCGR antibody.

WHAT IS CLAIMED IS:

1. Use of an anti-fibroblast growth factor receptor-1 (FGFR1) agonist in the manufacture of a medicament for treating a metabolic disease or condition in an individual, wherein the metabolic disease is selected from the group consisting of: polycystic ovary syndrome (PCOS), metabolic syndrome (MetS), obesity, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), hyperlipidemia, hypertension, type 2 diabetes, non-type 2 diabetes, type 1 diabetes, latent autoimmune diabetes (LAD), and maturity onset diabetes of the young (MODY), wherein the FGFR1 agonist does not activate FGFR2 or FGFR3.

2. The use of claim 1, wherein the FGFR1 agonist is an anti-FGFR1 antibody.

3. The use of claim 2, wherein the anti-FGFR1 antibody binds to peptide #26 KLHAVPAAKTVKFKCP (SEQ ID NO: 28) or peptide #28 FKPDHRIGGYKVRY (SEQ ID NO: 29).

4. The use of claim 2, wherein the anti-FGFR1 antibody binds to both FGFR1b and FGFR1c.

5. The use of any one of claims 2-4, wherein the antibody is a bispecific antibody.

6. The use of claim 5, wherein the antibody also binds to beta-Klotho.

7. An isolated antibody that binds to FGFR1, wherein the antibody is an agonist of FGFR1 activity.

8. The isolated antibody of claim 7, wherein the antibody is not an agonist of FGFR2 or FGFR3.

9. The antibody of claim 7 or 8, wherein the antibody is a monoclonal antibody.

10. The antibody of any one of claims 7-9, wherein antibody binds to peptide #26 KLHAVPAAKTVKFKCP (SEQ ID NO: 28) or peptide #28 FKPDHRIGGYKVRY (SEQ ID NO: 29).

11. The antibody of any one of claims 7-10, wherein the antibody is a human, humanized, or chimeric antibody.

12. An anti-FGFR1 antibody, wherein the antibody comprises (a) HVR-H3 comprising an amino acid sequence selected from the group consisting of SSGYGGSDYAMDY (SEQ ID NO: 16), SGYGGSDYAMDY (SEQ ID NO: 17), EHFDAWVHYYVMDY (SEQ ID NO: 18), TGTDVMDY (SEQ ID NO: 19), and GTDVMDY (SEQ ID NO: 20), (b) HVR-L3 comprising the amino acid sequence QQSYTTPPT (SEQ ID NO: 23), and (c) HVR-H2 comprising an amino acid sequence selected from the group consisting of $X_1X_2IX_3PX_4DGX_5TX_6YADSVKG$, wherein $X_1$ is A or G, $X_2$ is D or E, $X_3$ is D or Y, $X_4$ is N or Y, $X_5$ is A or D, and $X_6$ is D or Y (SEQ ID NO: 24) and $X_1IX_2PX_3DGX_4TX_5YADSVKG$, wherein $X_1$ is D or E, $X_2$ is D or Y, $X_3$ is N or Y, $X_4$ is A or D, and $X_5$ is D or Y (SEQ ID NO: 25).

13. An anti-FGFR1 antibody, wherein the antibody comprises (a) HVR-H1 comprising the amino acid sequence $GFTFX_1X_2X_3X_4IX_5$, wherein $X_1$ is S or T, $X_2$ is N or S, $X_3$ is N or T, $X_4$ is W or Y, $X_5$ is H or S (SEQ ID NO: 26), (b) HVR-H2 comprising an amino acid sequence selected from the group consisting of $X_1X_2IX_3PX_4DGX_5TX_6YADSVKG$, wherein $X_1$ is A or G, $X_2$ is D or E, $X_3$ is D or Y, $X_4$ is N or Y, $X_5$ is A or D, and $X_6$ is D or Y (SEQ ID NO: 24) and $X_1IX_2PX_3DGX_4TX_5YADSVKG$, wherein $X_1$ is D or E, $X_2$ is D or Y, $X_3$ is N or Y, $X_4$ is A or D, and $X_5$ is D or Y (SEQ ID NO: 25), and (c) HVR-H3 comprising an amino acid sequence selected from the group consisting of SSGYGGSDYAMDY (SEQ ID NO: 16), SGYGGSDYAMDY (SEQ ID NO: 17), EHFDAWVHYYVMDY (SEQ ID NO: 18), TGTDVMDY (SEQ ID NO: 19), and GTDVMDY (SEQ ID NO: 20).

14. The antibody of claim 13, wherein the antibody comprises (a) HVR-H1 comprising the amino acid sequence GFTFTSTWIS (SEQ ID NO: 7), (b) HVR-H2 comprising an amino acid sequence selected from the group consisting of GEIDPYDGDTYYADSVKG (SEQ ID NO: 10) and EIDPYDGDTYYADSVKG (SEQ ID NO: 11), and (c) HVR-H3

comprising an amino acid sequence selected from the group consisting of SSGYGGSDYAMDY (SEQ ID NO: 16) and SGYGGSDYAMDY (SEQ ID NO: 17).

15. The antibody of claim 13, wherein the antibody comprises (a) HVR-H1 comprising the amino acid sequence GFTFSNNYIH (SEQ ID NO: 8), (b) HVR-H2 comprising an amino acid sequence selected from the group consisting of ADIYPNDGDTDYADSVKG (SEQ ID NO: 12) and DIYPNDGDTDYADSVKG (SEQ ID NO: 13), and (c) HVR-H3 comprising the amino acid sequence EHFDAWVHYYVMDY (SEQ ID NO: 18).

16. The antibody of claim 13, the antibody comprises (a) HVR-H1 comprising the amino acid sequence GFTFTSNWIS (SEQ ID NO: 9), (b) HVR-H2 comprising an amino acid sequence selected from the group consisting of AEIDPYDGATDYADSVKG (SEQ ID NO: 14) and EIDPYDGATDYADSVKG (SEQ ID NO: 15), and (c) HVR-H3 comprising an amino acid sequence selected from the group consisting of TGTDVMDY (SEQ ID NO: 19) and GTDVMDY (SEQ ID NO: 20).

17. The antibody of any one of claims 12-16, further comprising (a) HVR-L1 comprising the amino acid sequence RASQDVSTAVA (SEQ ID NO: 21); (b) HVR-L2 comprising the amino acid sequence SASFLYS (SEQ ID NO: 22); and (c) HVR-L3 comprising the amino acid sequence QQSYTTPPT (SEQ ID NO: 23).

18. The antibody of claim 13, comprising a VH sequence selected from the group consisting of SEQ ID NO: 2, 3 and 4.

19. The antibody of claim 18, further comprising a VL sequence of SEQ ID NO: 6.

20. The antibody of any one of claims 7-19, wherein the antibody is a multispecific antibody.

21. The antibody of claim 20, wherein the antibody also binds to beta-Klotho.

22. The antibody of any one of claims 7-21, which is an IgG1 antibody.

23. Isolated nucleic acid encoding the antibody of any one of claims 7-22.

24. A host cell comprising the nucleic acid of claim 23.

25. A method of producing an antibody comprising culturing the host cell of claim 24 so that the antibody is produced.

26. The method of claim 25, further comprising recovering the antibody from the host cell.

27. A pharmaceutical formulation comprising an antibody of any one of claims 7-22 and a pharmaceutically acceptable carrier.

28. The antibody of any one of claims 7-22 for use as a medicament.

29. The antibody of any one of claims 7-22 for use in treating a metabolic disease or condition selected from the group consisting of: polycystic ovary syndrome (PCOS), metabolic syndrome (MetS), obesity, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), hyperlipidemia, hypertension, type 2 diabetes, non-type 2 diabetes, type 1 diabetes, latent autoimmune diabetes (LAD), and maturity onset diabetes fo the young (MODY).

30. The antibody of any one of claims 7-22 for use in sensitizing an individual to insulin.

31. Use of the antibody of any one of claims 7-22 in the manufacture of a medicament.

32. The use of claim 31, wherein the medicament is for treatment of a metabolic disease or condition selected from the group consisting of: polycystic ovary syndrome (PCOS), metabolic syndrome (MetS), obesity, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), hyperlipidemia, hypertension, type 2 diabetes, non-type 2 diabetes, type 1 diabetes, latent autoimmune diabetes (LAD), and maturity onset diabetes fo the young (MODY).

33. The use of claim 31, wherein the medicament is for sensitizing an individual to insulin.

34. Use of the antibody according to any one of claims 7-22 in the manufacture of a medicament for treating diabetes in an individual.

35. The use of claim 34, wherein the medicament is to be administered with another agent to treat diabetes provided that the other agent is not insulin.

36. The use of claim 34, wherein the medicament is to be administered with an agent to treat cardiovascular disease.